

DISTRIBUTED ENERGY RESOURCES

Weekly Summary of Events

www.eren.doe.gov/der

January 12, 2001

What's News With DER?

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DOE News

On January 11, **David Wooley** gave a presentation entitled "Development of Renewable Energy Strategy through Clean Air Act Legislation" at a brown bag seminar co-sponsored by DOE and the National Renewable Energy Laboratory (NREL). David is a partner in the law firm of Young, Sommer, LLC, in Albany, NY, and a consultant to the American Wind Energy Association. David recently completed a policy paper published by the Renewable Energy Policy Project (REPP), *A Guide to the Clean Air Act for the Renewable Energy Community*, addressing policies to allow wind, solar, and biomass energy producers to benefit from emissions trading programs. (A free copy of this paper is available at www.repp.org.) David's presentation included some of the results of his paper, as well as suggestions on how to change clean air statutes, regulations, and implementation practices in order to provide stimulus to renewable development. More than 60 people attended the seminar, including representatives from DOE, EPA, and various other agencies and organizations. Tina Kaarsberg offered opening remarks, and Assistant Secretary Dan Reicher spoke briefly about the importance of bringing environmental regulators and energy technology and policy experts together in this manner. The seminar was the first of a new series of brown bag seminars focusing on new and innovative renewable energy and energy efficiency analysis strategies, models, and technologies that are being developed by NREL. The seminars are scheduled for the second Thursday of every month; the next one will be held February 8 (See "Calendar of Events" in this issue for more information.)

The world's largest **compressed air energy storage** (CAES) project has been initiated in Norton, OH. The project is sited in a "brown field" with an abandoned underground limestone mine. Using inexpensive off-peak electricity, air will be compressed to some 900 - 1600 psi in a 34 million cubic feet cavern. At periods of high demand the air will be brought to the surface and used with clean-burning natural gas-fired turbines. The \$1.2 billion facility is expected to be completed by spring of 2003. It will ramp up to an impressive total of 2,700 MW over a period of four years. CAES technology was pioneered by DOE's Energy Storage program with extensive engineering analysis and the eventual construction of the first CAES facility in the U.S.

Anne-Marie Borbely-Bartis is on detail to the Office of

Distributed Energy Resources for program support in network communications, control systems, codes & standards, market analyses, and public outreach. Ms. Borbely, author of "Distriubuted Generation: Power Paradigm for the New Millenium" is a program manager for Technology Planning and Deployment at the Pacific Northwest National Lab (PNNL) in Richland, WA. Prior to joining PNNL, Ms. Borbely managed the Energy Services division of Frost & Sullivan, an international market research corporation. Ms. Borbely has authored over 80 articles in English, Romanian, and Hungarian and currently oversees DER editorial content for Energy User News and Intech Magazine. Her DER consulting clients have included Toyota, Visteon, Ingersoll-Rand, and Caterpillar.

The National Renewable Energy Laboratory (NREL) has established a new center for DER. The DER Center at NREL will conduct research and provide information needed to efficiently develop additional power supplies from relatively small, decentralized generating units, ideally at or near the sites they serve. This involves both interconnectivity systems that enable electricity produced by a variety of sources to flow onto the grid and specialized technologies for producing the new power itself.

Industry News

PacifiCorp, through its non-regulated subsidiary PacifiCorp PowerMarketing, Inc. (PPM), and FPL Energy announced an agreement to develop and market power from the world's largest single wind energy development. FPL Energy will build, own and operate the new wind farm along the Washington-Oregon border southwest of Walla Walla, WA. PPM will purchase and market the entire output of the project over a 25-year period. When fully operational, the 300-MW Stateline Wind Generating Project will include more than 450 wind turbines that reportedly will produce electricity to serve the equivalent of some 70,000 homes annually.

BAE SYSTEMS Controls announced in late December that it will supply the propulsion systems for 200 new hybrid-electric buses for the New York City Transit (NYCT) system. BAE SYSTEMS will provide its HybriDrive systems for Orion Bus Industries, which will assemble the buses. Currently, NYCT operates 10 buses that use the HybriDrive system, and they have logged more than 200,000 miles of service.

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**North Central Bronx Hospital** (NCBH) recently became one of the first medical facilities in the country to generate electricity from a fuel cell power plant. The US\$900,000 fuel cell, co funded with a US\$200,000 grant from the U.S.

Department of Energy (DOE), supplements the hospital's grid power. It also demonstrates the ability to provide backup power, in addition to the medical facility's emergency diesel generators, in the event of problems with the grid.

## Feature of the Week

### Annual Distributed Power Program Review Meeting

January 16-19, 2001  
Washington, D.C.

In 1998, the **Department of Energy (DOE)** established the **Distributed Power Program** to address system integration issues and market barriers that may prohibit the widespread deployment of distributed power technologies. Initial efforts have involved creating national technical interconnection standards, establishing a research and development program to address system integration technologies, documenting regulatory and institutional market barriers, and working with industry and state and Federal policymakers to remove barriers. The **National Renewable Energy Laboratory (NREL)** has been leading these research activities for DOE.

DOE held review and planning meetings in December 1998 and September 1999 to share progress with the program and to solicit input from industry and other Federal, state, and local officials. The next program review meeting will be held next week, January 16-19, at the Wyndham Hotel in Washington, D.C. The final agenda includes sessions on the following topics:

- Technical Interconnection Requirements and Testing
- Near-Term Applications
- Advanced System Integration and Control
- Standards, Codes, and Regulations

Session chairs will be: Richard DeBlasio, Thomas Basso, Holly Thomas, Ben Kroposki, and Gary Nakarado of NREL. Representatives from DOE, state and local governments, regulatory agencies, and industry will give presentations at the meeting. Highlights include:

*DER Activities in the Office of Power Technologies*  
-Dr. Robert Dixon, Deputy Assistant Secretary

*Overview of the Distributed Power Program*  
-Dr. Joseph Galdo, Distributed Power Program Manager

*Industrial Distributed Generation*  
-Mike Karnitz, Oak Ridge National Laboratory

The program review will conclude with a 2-day **Institute of Electrical and Electronics Engineers (IEEE) SCC21 and P1547 Meeting**, which will take place Wednesday afternoon through Friday at noon. The key activities will be:

- 1) Review and develop IEEE SCC21 P1547 - *Distributed Resources Interconnected with the Electric Power System* (Draft 6)
- 2) Initiate establishment of additional IEEE SCC21 working groups for interconnection system testing, control, applications, networks, and certification for development of recommended practices and guidelines

For more information on IEEE's working groups, see <http://grouper.ieee.org/groups/index.html>.

## CALENDAR OF EVENTS

| Date                 | Event                                                                                                                  | Location          | Other Information                                                                                                 |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>JANUARY 2001</b>  |                                                                                                                        |                   |                                                                                                                   |
| 16-19                | DOE Distributed Power Program Review Meeting                                                                           | Washington, DC    | <a href="http://www.eren.doe.gov/distributedpower">www.eren.doe.gov/distributedpower</a>                          |
| 23-25                | Pricing Strategies for Distribution Companies                                                                          | Orlando, FL       | (818) 888-4444; <a href="http://www.informationforecast.com">www.informationforecast.com</a>                      |
| 24-25                | Distributed Generation Conference                                                                                      | Denver, CO        | <a href="http://www.euci.com">www.euci.com</a> ; 303-770-8800                                                     |
| 29-30                | Harvesting Clean Energy for Rural Development: New Economic Opportunities in Wind, Biomass, Solar and Geothermal Power | Spokane, WA       | Curtis Framel DOE/Seattle 206-553-7841                                                                            |
| 28-31                | Air Conditioning, Heating and Refrigeration Exposition                                                                 | Atlanta, GA       | <a href="http://www.agcc.org">www.agcc.org</a>                                                                    |
| <b>FEBRUARY 2001</b> |                                                                                                                        |                   |                                                                                                                   |
| 8-9                  | Congestion Management Conference                                                                                       | Denver, CO        | <a href="http://www.euci.com">www.euci.com</a> ; 303-770-8800                                                     |
| 8                    | NREL Brown Bag Series: Representation of Renewable Energy in Models                                                    | Washington, DC    | <a href="http://www.nrel.gov/events.html">www.nrel.gov/events.html</a>                                            |
| 8                    | FEMP DG Workshop                                                                                                       | San Jose, CA      | Gail Norby 303-384-7407                                                                                           |
| 20-22                | Micro Power: Capitalizing on Distributed Energy Resource Strategies for Competitive and Reliable Power                 | San Francisco, CA | Bob Dixon is giving a talk entitled, "Distributed Energy Resources: What's New at the U.S. Department of Energy." |
| 19-22                | 4th Industrial Energy Efficiency Symposium                                                                             | Washington, DC    | Sponsored by OIT; OPT will have a booth there; <a href="http://www.oitexpo4.com">www.oitexpo4.com</a>             |
| 22                   | Steel-Utility Workshop                                                                                                 | Washington, DC    | Peter Solmon-Cox; 202-586-2380                                                                                    |
| <b>MARCH 2001</b>    |                                                                                                                        |                   |                                                                                                                   |
| 8                    | NREL Brown Bag Series: Renewable Energy and Real Options Analysis                                                      | Washington, DC    | <a href="http://www.nrel.gov/events.html">www.nrel.gov/events.html</a>                                            |
| 20-24                | Distributed Generation Conference                                                                                      | San Diego, CA     | <a href="http://www.powerin.org">www.powerin.org</a>                                                              |
| 21-23                | 5th Annual Distributed Generation and On-site Power Conference                                                         | New Orleans, LA   | Pat Hoffman to give keynote address; <a href="http://www.dist-gen.com">www.dist-gen.com</a>                       |
| <b>APRIL 2001</b>    |                                                                                                                        |                   |                                                                                                                   |
| 2-3                  | Business Communications Company's 1 <sup>st</sup> Fuel Cell Conference                                                 | San Antonio, TX   | EERE representative to speak; <a href="http://www.buscom.com">www.buscom.com</a>                                  |
| 23-25                | Intertech's Fifth International Conference on Distributed Power                                                        | Washington, D.C.  | Hugh Olmstead; <a href="mailto:olmstead@intertechusa.com">olmstead@intertechusa.com</a> ; 207-281-9606            |

## CALENDAR OF EVENTS

| Date                | Event                                      | Location         | Other Information                            |
|---------------------|--------------------------------------------|------------------|----------------------------------------------|
| <b>MAY 2001</b>     |                                            |                  |                                              |
| 1-3                 | Industrial Energy Technology Conference    | Houston, TX      | jim@esl.tamu.edu                             |
| 9-10                | Energy Management Conference               | San Diego, CA    | Sponsored by FEMP; www.aeecenter.org         |
| 30-31               | Fuel Cells Codes & Standards Summit V      | College Park, MD | ronald.fiskum@ee.doe.gov                     |
| <b>AUGUST 2001</b>  |                                            |                  |                                              |
| 29-Sep<br>3         | IEEC Integrated Energy Efficiency Congress | Cleveland, OH    | Sponsored in part by FEMP; www.aeecenter.org |
| <b>OCTOBER 2001</b> |                                            |                  |                                              |
| 24-26               | World Energy Engineering Congress          | Atlanta, GA      | www.agcc.org                                 |